REMARKS

Claim 1 is pending in this application. By this Amendment, claim 1 is amended to specify that the housing is one piece and that the screen panel is directly mounted in the housing. Support for the amendments to claim 1 may be found in the original specification at, for example, Figures 1-3.

Claim 1 has previously been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,548,350 (hereinafter Yamada). This rejection is respectfully traversed.

As shown in present Figure 1, a rear projector includes a one piece housing 2 including an opening 21 defined by an opening edge portion 22 of the housing 2. A screen panel 3 is directly mounted in the housing 2 and is attached to the front side of the housing 2 such that the opening edge portion 22 of the housing 2 and a periphery 34 of the screen panel are opposed to each other. A closed-cell expanded resin dust-proofing elastic member 7 is disposed between the periphery 34 of the screen panel 3 and the opening edge portion 22 of the housing 2. Thus, in the rear projector, the screen panel 3 is directly mounted in and fixed to the housing 2 so that a periphery 34 of the screen panel 3 and an opening edge portion 22 of the housing 2 sandwich the dust-proofing elastic member 7. Claim 1 defines a rear projector having a structure such as illustrated in Figure 1.

1. One Piece Housing and Direct Mounting

Claim 1 thus recites that the screen panel is directly mounted in and is attached to the front side of the one piece housing such that the opening edge portion of the housing and a periphery of the screen panel are opposed to each other, the opening edge portion and the screen panel sandwiching the dust-proofing elastic member therebetween. This structure as recited in claim 1 requires the screen panel to be directly mounted in and fixed to a one piece

housing, with a dust-proofing elastic member therebetween. Yamada fails to teach or suggest such direct attachment to a one piece housing or the benefits associated therewith.

Yamada describes a projection type television in which the screen is maintained on the framework even when the temperature changes or an external force is applied. See the Abstract. As shown in Figure 2 of Yamada, the screen 1 is mounted in framework 2, and an end portion of framework 2 is inserted into a slot 3b formed around an opening 3a of the housing 3. See col. 4, lines 64-67 and col. 5, lines 8-12. The framework 2 in Yamada is thus an intermediate piece between the screen 1 and the housing 3.

Yamada thus fails to teach or suggest a rear projector in which a screen panel is directly mounted in and fixed to a one piece housing as in claim 1. In addition, because Yamada fails to teach or suggest the direct mounting of the screen panel and housing as in claim 1, Yamada also necessarily fails to teach or suggest incorporation of a dust-proofing elastic member disposed between the periphery of the screen panel and the opening edge portion of the one piece housing, also as required in claim 1.

The distinctions between the structures described in Yamada and recited in present claim 1 are substantial. As discussed in the present specification, the rear projector structure of claim 1 not only allows the screen panel to be stably held in the housing, it also prevents the entry of dust into the housing. See, for example, paragraphs 7 and 20-22 of the present specification. On the other hand, the mounting system described in Yamada only indirectly mounts the screen to the housing through the use of the intermediate framework 2. At the point of insertion of the framework 2 into the slot 3b of the housing 3 in Yamada, Yamada does not teach or suggest the use of any dust-proofing elastic members at all. Because of this, there is a distinct possibility in Yamada that a space may be generated between the end portion of the framework 2 and the slot 3b of the opening 3a. The structure in Yamada thus does not avoid the problem of dust entering the housing 3 at this location.

2. Closed-Cell Expanded Resin Dust-Proofing Elastic Member

The Patent Office has acknowledged that Yamada does not disclose that the elastic member 5 must be comprised of a closed-cell expanded resin. However, the Patent Office has alleged that the foams described in Yamada are closed-cell expanded resins. Applicants respectfully submit that this allegation is incorrect.

As explained at paragraph [0018] of the present specification, the dust-proofing sealing member 7 of the rear projector must be formed of a closed-cell expanded resin so as to be excellent in dust-proofing capability and have a high elastic deformation rate. For dust-proofing capability, it is thus important that the sealing member be comprised of a closed-cell expanded resin. As explained below, the difference between closed-cell expanded resins and open-cell expanded resins is profound, and Yamada cannot be viewed as teaching or suggesting the use of closed-cell expanded resins.

Closed-cell and open-cell expanded resins differ in physical structure. In closed-cell expanded resins, the walls between individual cells within the resin are complete such that the cells are independent from each other (i.e., not continuous with each other). In contrast, the walls between cells in an open-cell expanded resin are incomplete and have openings such that the cells in the resin are continuous with each other.

As a result of this structural difference, closed-cell and open-cell expanded resins have different performance properties. For example, because the walls between cells are complete and the cells are independent from each other in a closed-cell expanded resin, the closed-cell expanded resin does not have air permeability. The walls between cells within the open-cell expanded resin have holes such that these cells are continuous with each other, thereby imparting air permeability to the open-cell expanded resin. This difference is significant with respect to the present application because closed-cell expanded resins that lack air

permeability are able to reliably suppress the entrance of dust, unlike open-cell expanded resins.

Additionally, in closed-cell expanded resins, because the walls between cells are complete, flexibility is high and elastic deformation rate is large. As a result, even if a screen panel 3 is largely expanded, the sealing member 7 is able to deform while staying reliably attached to a periphery 34 and an opening edge portion 22.

Yamada describes that the elastic member 5 may be comprised of materials such as polyurethane foam, polyethylene foam or other plastic foams that include small pores. See col. 6, lines 55-62 of Yamada. However, Yamada does not teach or suggest that the elastic member must be comprised of a closed-cell expanded resin as required in present claim 1.

As discussed above, a closed-cell expanded resin has the advantage of being excellent in suppressing dust from entering the housing, while also having a high elastic deformation rate. Yamada does not teach or suggest use of a closed-cell expanded resin as the elastic member 5.

Moreover, while Yamada teaches that an elastic member 5 may be included between the framework 2 and the screen 1, Yamada further teaches that this elastic member is only used to assist in holding the screen in the framework 2. Yamada thus does not address the problem of dust entering the housing at all. Because of this, Yamada does not teach or suggest that the elastic member 5 is to be used to impart dust-proofing of the seal, and thus nothing in Yamada would have directed one of ordinary skill in the art to have selected a closed-cell expanded resin over an open-cell expanded resin in Yamada.

In the Advisory Action, the Patent Office alleged that a Fuso Rubber document submitted by applicants indicated that polyethylene foam is closed-cell, and thus the polyethylene foam described at col. 6, lines 55-57 would necessarily be closed-cell. This conclusion is incorrect and indicates a lack of understanding regarding foams.

While the Fuso Rubber document indicates that polyethylene foam may be closed-cell, it is incorrect to conclude that all polyethylene foams are closed-cell. A polyethylene foam can be either open-cell or closed-cell, depending on how the foam is made. Numerous examples of open-cell polyethylene foams appear in the literature. For example, attached is a description of Nitto Denko's SUNMAP open-cell polyethylene foam, as well as a description of several open-cell polyethylene foam products from Star Case. Thus, it is clearly incorrect to assert that all polyethylene foams are necessarily closed-cell foams.

Thus, contrary to the assertions of the Patent Office, none of the foam materials such as polyurethane foam, polyethylene foam or other plastic foams mentioned in Yamada are necessarily and inherently closed-cell. The Patent Office thus has failed to establish a *prima facie* case of anticipation, and the rejection must be withdrawn for this additional reason.

3. Conclusion

For all the foregoing reasons, it is evident that Yamada neither teaches nor suggests the rear projector as defined in present claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claim 1 is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Christopher W. Brown
Registration No. 38,025

JAO:CWB/cwb

Date: September 13, 2005

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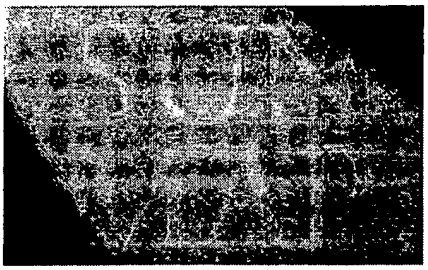
- Porous Film Products
- Membranes
- Surface Protection
- **Products List**

Ultrahigh-molecular-weight porous polyethylene film

SUNMAP

The characteristics of ultrahigh-molecular-weight polyethylene are maintained, with added air permeability due to its porosity.



Outline

SUNMAP is the porous sheet made of ultrahigh-molecular-weight polyethylene resin (UHMWPE) produced by Nitto Denko. In addition to the excellent chemical resistance, wear resistance and lelectrical properties peculiar to UHMWPE, SUNMAP, having the porous structure, affords the favorable properties, such as air permeability, low friction coefficient, and light diffusing ability. It has an excellent processability, and finds expanding applications.

Features

- A porous sintered material having an open-cell structure, affords the excellent air permeability and moisture permeability.
- Having high wear resistance & low friction coefficient and by its porous structure, the slip properties of SUNMAP is enhanced.
- With its high chemical stability, this film boasts excellent resistance to almost all chemicals, such as acids and alkalis etc.
- Excellent workability enables heat sealing, punching, and shaping.

Application Examples

[SUNMAP LC]For fixing glass scribers for LCDs

[SUNMAP LC-T]Anti-static type of SUNMAP LC

[SUNMAP HP]For fixing ceramic green sheets

Sizes

Thickness (mm)	Width (mm)	Surface Treatment
	max700	

0.1 ~ 2	(Available for roll or piece)	antistatic hydrophilic

*The technical data presented here are typical values only and should not be used for any specification purposes.

General Properties

Item	Unit	SUNMAP LC-T
Thickness	mm	0.5
Average pore size	μm	17
Air permeability	sec/100cm^2	1.4
Porosity	%	26
Tensile strength	Mpa	12
Elongation	%	90
Hardness	Shore D	48
Surface roughness	μm	2.0
Surface resistance	-	0.1

*The technical data presented here are typical values only and should not be used for any specification purposes.

Product		Thickness standard (mm)	Effective max. width (mm)	Features
LC Series (Thickness 0.1 to 0.5 mm available in rolls)	LC	0.1 0.2 0.3 0.5 1 2	700	Base
	LC-T	0.1 0.2 0.3 0.5 1	700	Antistatic
	LC-T5320	0.5 1	500	Antistatic single smooth side
HP Series	HP-5520	1.5	400	Base high ventilation
	HP-5320	2	400	Antistatic single smooth side

*Contact us for details concerning length.

Product		Thickness standard (mm)	Effective max. width (mm)	Features
LC Series (Thickness 0.1 to 0.5 mm available in rolls)	LC	0.1 0.2 0.3 0.5	700 (W) x 1200 (L)	Base
		1 2	500 (W) x 500 (L)	
	LC-T	0.1 0.2 0.3 0.5	700 (W) x 1200 (L)	Antistatic
		1 2	500 (W) x 500 (L)	
	LC-T5320	0.5 1	500 (W) x 500 (L)	Antistatic single smooth side
	HP-5520	1.5	400 (W) x 500 (L)	Base high ventilation

	HP Series	HP-5320	2	400 (W) x 500 (L)	Antistatic single smooth side

*Contact us for details concerning punching tolerance and other specifications.

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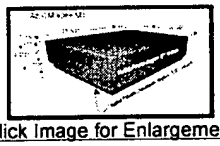
Foam Layers, Foam Fills & Foam Cut-Out Options

Our polyester foam layers option (ASCM306FMI) for the model ALUMNDA306NF aluminum case
▶ Purchase Details



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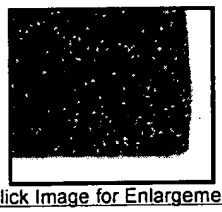
Polyester Foam Layers

Foam Type: Polyester Low Density
Foam thicknesses available: 1/2", 1", 2", 4"
or layers can be adhesive bonded to any height thickness.
Foam Density: Polyester is Low Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyester low density foam foam has an open cell structure.*
Foam Option Pricing for ASCM306FMI: Click Here
Pre-Cut Foam Structure: By combining various foam thicknesses a foam pack with vertical cut-outs will allow varying height compartments and space to organize your heavier weight items equipment. Our polyester foam fill option (ASCM306FMI) for the model ALUMNDA306NF aluminum case is cut to fit the lower case section.



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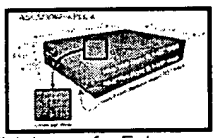
Polyethylene (Etha) Foam Layers

Foam Type: Polyethylene High Density
Foam thicknesses available: 1/2", 1", 2", 4"
or layers can be adhesive bonded to any height thickness.
Foam Density: Polyethylene is High Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyethylene high density foam has an open cell structure.*
Custom Size Pricing: Please contact Star Case
Pre-Cut Foam Structure: Cases can be alternately filled with multiple layers of high density polyethylene foam. Most common foam thicknesses are 1/2", 1", 2", and 4". By combining various foam thicknesses a foam pack with vertical cut-outs will allow varying height compartments and space to organize your heavier weight items equipment.

Our pik n' pluk polyester foam option (ASCM306PIKPLUK) for the model ALUMNDA306NF aluminum case
▶ Purchase Details



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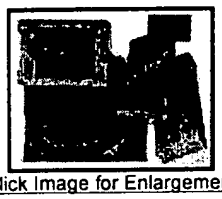
Polyester Cubed , Diced or Pik n' Pluk Foam Layers

Foam Type: Polyester Low Density
Foam thicknesses available: 1-1/2"
Foam Density: Polyester is Low Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyester low density foam has an open cell structure.*
Foam Option Pricing for ASCM306PIKPLUK: Click Here
Pre-Cut Foam Structure: This type of foam can be described as cubed, diced or pik n' pluk foam because it is specially sliced into 1/2"x1/2"x1-1/2" cubes that can be easily "plucked" out of the entire foam piece leaving behind voids. If this will suffice for your application, using these 1-3/8" thick layers can save you money. Our pik n' pluk foam option (ASCM306PIKNPLUK) for the model ALUMNDA306NF aluminum case is cut to fit the lower case section. A solid 1/2" polyester foam layer is provided for the floor of the lower case section.


Click Image for Enlargement

Polyester Convoluted Foam Fill

Foam Type: Polyester Low Density
Foam thicknesses available: 2"
Foam Density: Polyester is Low Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyester low density foam has an open cell structure.*
Custom Size Pricing: Please contact Star Case
Pre-Cut Foam Structure: Polyester convoluted foam provides an upper foam layer that fills the lid of several different Star Case aluminum carrying cases, most notably our model ALUMNDA306NF, ALUMNCP102FO and ALUMNDL903. A convoluted foam filled case lid is very forgiving when contacting your precision components and movement of case contents must be kept at a minimum while in transit..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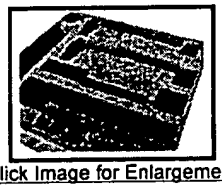
Polyester Foam Fill with Hotwire Cut-outs

Foam Type: Polyester Low Density
Foam thicknesses available: 1/2", 1", 2", 4" or layers can be adhesive bonded to any height thickness.
Foam Density: Polyester foam is Low Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyester low density foam have an open cell structure.*
Custom Pricing: Please contact Star Case
Pre-Cut Foam Structure: Polyester low density foam for this application calling for hotwire cut-outs begins as flat layers or adhesive bonded layers of foam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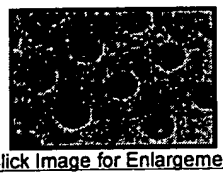
Polyethylene Foam Fill with Hotwire Cut-outs

Foam Type: Polyethylene High Density
Foam thicknesses available: 1/2", 1", 2", 4" or layers can be adhesive bonded to any height thickness.
Foam Density: Polyethylene is High Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyethylene high foam has an open cell structure.*
Custom Pricing: Please contact Star Case
Pre-Cut Foam Structure: Polyethylene high density foam for this application calling for hotwire cut-outs begins as flat layers or adhesive bonded layers of foam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Polyester or Polyethylene Foam with Multiple Circular Cutouts

Foam Type: Polyester Low Density or Polyethylene High Density
Foam thicknesses available: 1/2", 1", 2", 4" or layers can be adhesive bonded to any height thickness.
Foam Density: Polyester is Low Density and Polyethylene is High Density
Foam Color: Charcoal grey
Foam Cell Structure: Polyester low density foam has an open cell structure.*
Custom Pricing: Please contact Star Case
Pre-Cut Foam Structure: Polyester low density foam or Polyethylene high density foams for this application of circular cut holes begins as flat layers or adhesive bonded layers of foam

**** Open Cell Structure Foam Material:*** Our polyester and polyethylene foams have an open cell structure. Open-cell foam can be soft (low density) - like a cushion or the packaging material lining the inside walls of a shipping case to fit a fragile object being shipped or hard (high density) for the same application but for heavier weight items. The cell walls, or surfaces of the foam are open and air fills all of the spaces in the material. This makes the foam highly protective with excellent cushioning characteristics.

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